U.S. Application No.: 10/825,672

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-10. (canceled).

11. (previously presented): A method for preparing a gold sulfide colloid comprising reacting a solution of an Au(I) complex represented by formula (2) with a solution containing a sulfur compound in a protective colloid solution:

$$[L^{1}-Au(I)-(L^{2})_{m}]X_{n}$$
 (2)

wherein L¹ represents a compound represented by formula (1), L² represents a compound represented by formula (1) or a halogen atom, provided that L¹ and L² may be the same or different or may be combined, X represents a counter salt necessary for neutralizing the electric charge of the compound, m represents 0 or 1, and n represents a value of 0 to 1 and may be a decimal;

$$R^1$$
-Ch- R^2 (1)

wherein R¹ and R² each independently represents an alkyl group, an alkenyl group, an alkynyl group, an aryl group or a heterocyclic group, R¹ and R² may combine with each other to form a 3-, 4-, 5-, 6- or 7-membered ring, and Ch represents a sulfur atom, a selenium atom or a tellurium atom.

U.S. Application No.: 10/825,672

- 12. (canceled).
- 13. (currently amended): A method of chemically sensitizing a silver halide emulsion, which comprises:
- (a) preparing a gold sulfide colloid by reacting a solution of an Au(I) complex represented by formula (2) with a solution containing a sulfur compound in a protective colloid solution:

$$[L^{1}-Au(I)-(L^{2})_{m}]X_{n}$$
 (2)

wherein L¹ represents a compound represented by formula (1), L² represents a compound represented by formula (1) or a halogen atom, provided that L¹ and L² may be the same or different or may be combined, X represents a counter salt necessary for neutralizing the electric charge of the compound, m represents 0 or 1, and n represents a value of 0 to 1 and may be a decimal;

$$R^1-Ch-R^2 \qquad (1)$$

wherein R¹ and R² each independently represents an alkyl group, an alkenyl group, an alkenyl group, an alkenyl group, an aryl group or a heterocyclic group, R¹ and R² may combine with each other to form a 3-, 4-, 5-, 6- or 7-membered ring, and Ch represents a sulfur atom, a selenium atom or a tellurium atom; and

(b) chemically sensitizing a silver halide emulsion using a the gold sulfide colloid prepared according to the method claimed in claim 11.

U.S. Application No.: 10/825,672

14-23. (canceled).

- 24. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein L^1 and L^2 in formula (2) are the same compound and the metal complex is a symmetric gold complex.
- 25. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein in formula (2), either L^1 or L^2 is substituted by at least one water-soluble group.
- 26. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein in formula (2), L^1 and L^2 are substituted by at least one water-soluble group.
- 27. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein the reaction temperature is from 0 to 100°C.
- 28. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein one of said solution of an Au(I) complex represented by formula

Attorney Docket Q81115

AMENDMENT UNDER 37 C.F.R. § 1.116

U.S. Application No.: 10/825,672

(2) and said solution containing a sulfur compound is added to said protective colloid solution first and the other is added later.

- 29. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein both of said solution of an Au(I) complex represented by formula (2) and said solution containing a sulfur compound are simultaneously added dropwise to said protective colloid solution.
- 30. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein the gold concentration of the gold sulfide colloid is, in terms of the gold atom concentration, from 0.1 to 100 mmol/kg.
- 31. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein the sulfur compound is added in an amount of from 0.5 to 10 molar times amount of the Au(I) complex represented by formula (2).
- 32. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein the colloidal gold sulfide is prepared without producing environmentally harmful cyan ion.

Attorney Docket Q81115

AMENDMENT UNDER 37 C.F.R. § 1.116

U.S. Application No.: 10/825,672

33. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, further comprising preparing said solution of an Au(I) complex represented by formula (2) by adding an excess amount of a compound represented by formula (1) to a solution of an Au(III) compound.

- 34. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 33, wherein said Au(III) compound is selected from the group consisting of chloroauric acid, sodium tetrachloroaurate, sodium tetrabromoaurate, potassium tetrachloroaurate, potassium tetrabromoaurate, ammonium tetrachloroaurate, ammonium tetrabromoaurate, auric chloride, auric bromide, auric iodide, potassium auric iodide and Au(III) hydroxide.
- 35. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 33, wherein said excess amount is 2 to 100 molar times.
- 36. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein said solution containing a sulfur compound comprises a labile sulfur compound selected from the group consisting of a thiosulfate, thiourea, thioamide, rhodanine, phosphinesulfide, thiohydantoin, 4-oxo-oxazolidine-2-thione, disulfide, dipolysulfide, mercapto compound, polythionate, elemental sulfur, hydrogen sulfide, sodium sulfide, sodium hydrosulfide, and active gelatin and water or an organic solvent.

Attorney Docket Q81115

AMENDMENT UNDER 37 C.F.R. § 1.116

U.S. Application No.: 10/825,672

- 37. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein said protective colloid solution is selected form the group consisting of gelatin, gelatin derivative, graft polymer of gelatin with another polymer, albumin, casein; sugar derivative, cellulose derivative, sodium alginate, starch derivative; and homo- or co-polymer of polyvinyl alcohol, polyvinyl alcohol partial acetal, poly-N-vinylpyrrolidone, polyacrylic acid, polymethacrylic acid, polyacrylamide, polyvinylimidazole and polyvinylpyrazole.
- 38. (previously presented): The method for preparing a gold sulfide colloid as claimed in claim 11, wherein said protective colloid solution is gelatin.
- 39. (previously presented): The method for chemically sensitizing a silver halide emulsion as claimed in claim 13, wherein L^1 and L^2 in formula (2) are the same compound and the metal complex is a symmetric gold complex.
- 40. (previously presented): The method for chemically sensitizing a silver halide emulsion as claimed in claim 13, wherein in formula (2), either L^1 or L^2 is substituted by at least one water-soluble group.

AMENDMENT UNDER 37 C.F.R. § 1.116 U.S. Application No.: 10/825,672

(previously presented): The method for chemically sensitizing a silver halide 41. emulsion as claimed in claim 13, wherein in formula (2), L¹ and L² are substituted by at least one water-soluble group.